

Mission Success Bulletin

June 1, 2006

on-line

<http://www.lockheedmartin.com/michoud/>

Volunteer employees assist on ET-118

When it became evident several weeks ago that ET-118 was at risk to not make its planned ship date, a call went out to departments soliciting volunteers to work in Building 420 in a variety of support roles.

“To deliver a tank, you've got to essentially do two things – you've got to get the hardware complete and you also have to get the paper complete,” explains **Mark Bryant**, deputy ET project manager.

“And the paper completion is just as important as the hardware. We're not looking for people to pick up a wrench



Workers swarm all over ET-118 on Monday in an effort to prepare the tank for delivery.

or a spray gun and work on the tank. Where we need their support primarily is in closing paper.”

Bryant says Michoud normally keeps up with closing out the paper as the tank is being built. “But with

emphasis on supporting the customer's manifest, continuing Katrina effects, the IFA (In-Flight Anomaly investigation on STS-114 foam loss) and engineering test articles, we've fallen behind a little bit.”

David Lander, a technical auditor, is one of those helping out on ET-118. “I review the Manufacturing Process Plans looking for issues that need to be resolved to facilitate closure of the paperwork. We look at stamp and date legibility and make sure recorded data is accurate. We also review the redline entries for clarity. In general, we look for things that do not quite look right or make sense, and we flag them so that the issues can be worked.

“I see this as an opportunity to directly support the delivery of ET-118 by helping to ensure that the paperwork is as clear and clean as possible, and that there are no issues that could impede the closure process,” Lander says.

Mail clerk **William Wilson** is also helping out in Building 420. “I review files to make sure that people with the right certs have signed off from production, quality, and safety.”

Because workers are swarming all over the tank, other volunteers have been assigned roles as mat and



In anticipation of a July launch, Discovery along with ET-119 and Solid Rocket Boosters arrives at Launch Pad 39B at Kennedy Space Center at 8:30 p.m. May 19. Mounted on the mobile launch platform, the shuttle's 4.2 mile journey to the pad took almost eight hours crawling at less than 1 mph.

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ET-118

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platform monitors. To be a monitor, one must take the Thermal Protection Systems Awareness course. This shows employees how to carefully walk on the tank and where to stand without damaging the foam. The employee monitors people on the tank and on the platform scaffolding where employee numbers are limited.

"If I can get a volunteer to be a mat or platform monitor, that frees up a certified Quality Control inspector to get down on the tank," Bryant says.

The number of volunteers from all departments has been gratifying to Bryant and, also he thinks, to the people who work in Building 420.



Technical auditor David Lander (right) goes over the process of how to review paper on ET-118 with William Wilson.

"They're real eager," Bryant observes. "I look at it as a real good opportunity for people to get acquainted with the hardware."

Volunteers may be needed through the summer. Once ET-118 is delivered, ET-123 will come over from Cell A, and ET-124 will replace it in Cell A. In addition, ET-117 returned from Kennedy Space Center on Sunday. "Our plate is filling up," Bryant remarks.

"Return to Flight is what this is all about," Lander says. "I have done this previously, and I've seen how much work is involved in completing the ET. Everyone out here is dedicated to completing the ET for shipment to KSC." ■

"Excellent" grades on Award Fee

Lockheed Martin has received its report card from NASA for the Award Fee period October 1, 2005 to March 31, 2006, and the grades are "Excellent" in both Production and in MAF Operations & Maintenance.

NASA's performance evaluation contained 13 significant strengths and 25 other strengths while listing four opportunities for improvement.

"I was very gratified by the Award Fee," replied **Mark Bryant**, deputy ET project manager. "Every period you do things you're exceptionally proud of and every period you do things that you may have an opportunity to improve upon later.

"We continue to strive for success in the face of Katrina. It's a challenge. I think we really stepped up on the PAL ramp elimination project and got that done quickly."

NASA led the report by noting that the ET Project was given a challenge to deliver a tank with major design changes – removal of the Protuberance Airloads ramps.

NASA wrote: "This was the most significant design change of the tank's outer mold line since the early stages of the tank development. LMSSC's (Lockheed Martin Space Systems Company) response was remarkable in accepting the task by generating the engineering, executing the implementation and delivering ET-119 within two months, one week ahead of

schedule. This demonstrated incredible resourcefulness, resiliency and technical acumen on the part of the contractor team. They performed this feat under enormous pressure and in the midst of unimaginable personal hardships coping with the greatest natural disaster this country has ever seen. The U.S. manned spaceflight program owes a debt of gratitude to the contractor personnel for their personal sacrifices and dedication to the commitment of meeting the Shuttle Program's objectives."

Other significant strengths included:

- Quality – Lockheed Martin continues to develop and enhance the Thermal Protection Systems Non Destructive Evaluation techniques. The scope of this effort increased tremendously as a result of the demands of the In-Flight Anomaly investigation teams.
- Safety – Michoud Operations has had no OSHA reportable incidents in over 21 years... "an exceptional achievement."
- Problem Resolution – The propulsion group demonstrated exceptional performance in supporting STS-114 IFA investigations. NASA also noted that Lockheed Martin "did an excellent job assembling a team at KSC for aggressive execution of the removal and replacement of the GO2 (gaseous oxygen) vent & relief valve to preserve the

July launch window."

- Production Support – Lockheed Martin has developed activities that enhance the retention of critical skills for the ET Project through the life of the project. Michoud has "aggressively worked to resolve employee concerns in the Post-Katrina environment that assisted in recovery of personal lives. They continue to provide programs to employees and managers that prepare them for future emergency responses."

An opportunity for improvement cited Lockheed Martin for not controlling quality procedures and inspections at three NASA sites where ET work was performed. One instance at KSC resulted in damage to ET-119 that impacted processing schedule.

In the other category – MAF Operations & Maintenance – NASA complimented Michoud for, among other things, providing excellent support to the U.S. Coast Guard in relocating to MAF. NASA also recognized Michoud's activation of the independent water well that included all compliance and certification steps taken to ensure the water could be used for services site-wide.

Bryant said he wished to thank all those employees involved for their contributions, which made the high ratings possible in the performance evaluation period. ■



Michoud prepared for 2006 hurricane season

Many believe that the Michoud Assembly Facility fared better than most other companies during and after Hurricane Katrina – not because of luck – but because of the advance planning, the training and past storms that the ride-out crew had experienced.

“I don't think there's any doubt about it,” relates **Malcolm Wood**, senior manager for Facilities, Critical Operations & Maintenance, and a ride-out crew leader. “All of the planning, training and our own history on this facility during storms gave us an edge during Katrina. We knew basically what we were supposed to do, and we did it.”

That success of keeping the factory dry notwithstanding, this season might pose its own special challenges. To that end, those involved in safety and hurricane preparation have been working in a number of areas.

First, the Emergency Operations Center (EOC) is being relocated to a larger, expanded location within Building 320. Work is under way on the new EOC, which will feature office and conference areas, a communications center and upgraded communications equipment like satellite telephones.

Second, 20 security cameras around the perimeter of the plant will soon have emergency power so they can still operate during storms when power is out.

Third, remote-control upgrades are being implemented at Building 450's pump house that would allow operators to run the pumps without leaving the EOC inside Building 320.

The new EOC will be ready in June. Some of the other upgrades will come on line as hurricane season progresses. And of course the U.S. Army Corps of Engineers through contractor Boh Brothers has been working to strengthen Michoud's levees for several months.

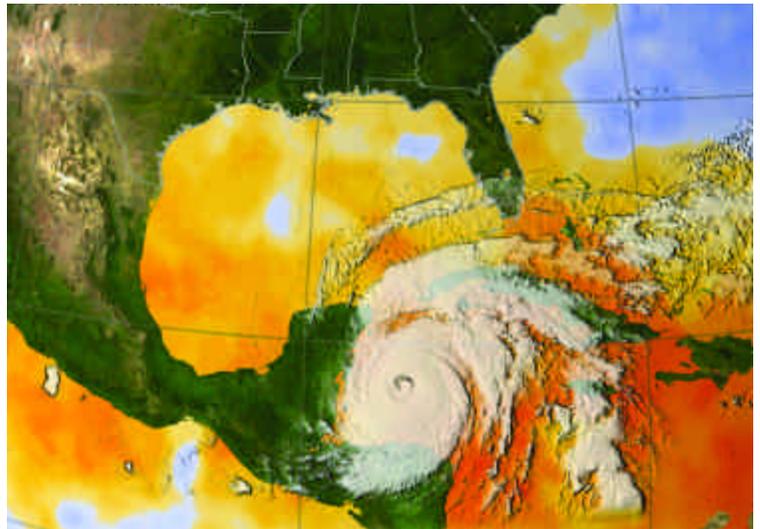
Studies are also under way to make Building 320 self-sufficient during a storm with its own power, water, generators, food,

bathrooms, etc. If the project gets the go-ahead, the roof would also be upgraded and the structure's integrity improved, utilities in the building would be raised in the event of flooding, and the building would have automatic emergency power and a dedicated HVAC system.

Another study involves identifying a location for another pumping station, one that would be elevated. A safe house for operators is also being studied. Decisions on these studies will come later this year.

In the meantime, Michoud prepares for the next storm. Cell phones with alternate area codes will go to those who stay behind in the hope the towers stay up and the phones work when others do not. In addition, a member of the ride-out crew is being trained to operate a HAM radio.

For more information go to Gumbo or Maffamily to see the city of New Orleans and the state's websites on emergency preparedness ■



Transition of MS&TC to Michoud nears completion

The transition of the Lockheed Martin Mississippi Space & Technology Center (MS&TC) at Stennis Space Center to Michoud Operations has entered its second and final phase with the signing of a Memorandum of Agreement (MOA) between **Kevin Bilger**, vice president, Program, Subcontract & Product Management at Sunnyvale and **Marshall Byrd**, vice president & general manager at Michoud Operations.

“What we're doing through this agreement is lowering the cost to our satellite customers, and we also are creating career paths and opportunities for the employees on both sides of the lake,” says **Larry Knauer**, director, Small Launch Vehicles Integration, who has been tasked with overseeing the seamless integration of the operations at Stennis and Michoud.

Lockheed Martin seeks the best value for its customers and sees significant benefits from the combined synergies of the Michoud and Stennis facilities, Knauer explained.

MS&TC is involved in satellite propulsion subsystem integration, thermal blanket, heat shield production, tube production bending and support, and precision cleaning.

“These will be the skills we also want to tap and utilize for the Crew Exploration Vehicle and the Crew Launch Vehicle systems,” says Knauer.

Phase 1 of the agreement began December 19 with the transition of 35 employees from thermal propulsion and insulation fabrication areas from Lockheed Martin Technical Operations at Stennis and will conclude in mid-summer with the transfer of approximately 60 additional personnel.

Remaining tasks to complete during Phase 2 are meeting all of the internal and external customer requirements, setting up a seamless communications structure, negotiating rental agreements, establishing Intra-Work Transfer Agreements and closing out a host of human resources issues. ■

Sunnyvale supports House Busters a second time around



Sunnyvale House Busters front row from left: Diana Ruud, Helen Han, Cathy Culver and Betty Szeto. Back row: Paul Vreeburg, Phil Ruud, Rebekah Zumr, Gail Neufeld, Frank O'Connor (Michoud), Jeff Baker, Ken James (Michoud), Sean Tobin and Esau Martinez.

No one group has come farther to volunteer for House Busters than 11 fellow Sunnyvale employees who flew into New Orleans on May 17, busted five Michoud employee houses and left last week.

This is the second time Sunnyvale employees have come to Michoud's aid – the first was over the Christmas holidays. This time they saw the total picture while working on **Kathy Eaton's** home in Gentilly, **Alvin Kurtz** and **Frank O'Connor's** in New Orleans East, **Yvonne Vielle's** in Slidell and **Karen Lewis'** in St. Bernard Parish.

Twelve to 15 feet of water inundated Lewis' home in Meraux. "It was in my attic and stayed in my house ten to 14 days," she recounts.

Everything still remained in her home for the California visitors. The ceilings and inner walls had caved in, so there was four to five feet of debris mired in mud blocking every room. In the middle of Lewis' home lay a huge timber, perhaps from a dock, that required several men to remove. And then there were the snakes.

"My eyes burned with sweat because of the heat," Lewis explained. "My house has all this sick water with the muck and the stench. To think that people would come here from California and do this kind of filthy, excruciatingly hard work to help us is just unbelievable. It was very emotional for me."

Paul Vreeburg of Technical Security at Sunnyvale was overwhelmed by the destruction

and the flooding. "When we look at the houses, it's like where do we start – everything needed attention. But as we would just begin in one corner, it would seem like things would start to open up, and yeah, before you know it, it seemed like we were done."

In addition to the Lockheed Martin employees, two friends from Adobe and Integrated Engineering Systems accompanied the Sunnyvale group. All took vacation time to come here. A civic organization helped with some of their travel expenses.

"We are very awe-inspired by the people here, the resiliency and the commitment to rebuilding," said organizer **Cathy Culver**, a member of the software engineering staff in Sunnyvale. "We wanted to come and help people get to a turning point where they could feel like some of the things were behind them and move on."

Several members of the group said they vividly remember the earthquake in the Bay Area in 1989 and how scary that was as many homes were destroyed. So they wanted to reach out to Michoud employees.

Culver said it was well worth the effort for the group

to come to New Orleans and that she admired Michoud employees who take vacation days on Wednesday to help fellow employees. Other employees volunteered to house the Sunnyvale group during their weeklong stay.



Rebekah Zumr (foreground), Cathy Culver and Jeff Baker tear out a ceiling at Frank O'Connor's home in New Orleans East.

"It was an honor to come here and contribute," Vreeburg noted. "Everyone was so gracious."

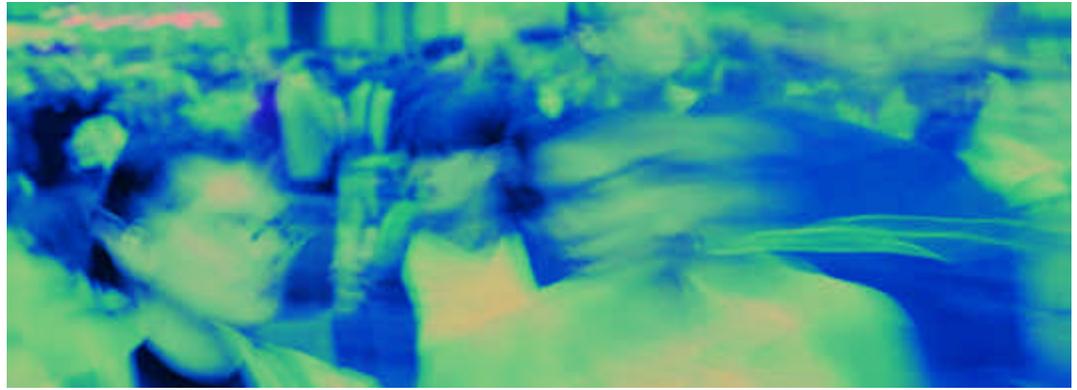
On their final day, the Sunnyvale group handed out "Give Hope" rubber bracelets. It was appropriate for a group that came from so far to give so much, leaving hope behind. ■

How's my squash?



Susan Washick (left) plants zucchini squash in a community garden in Huntsville, Ala. The Care Assurance System for the Aging and Homebound (CASA) runs the garden and delivers vegetables at no cost to the elderly and homebound in the area. Lockheed Martin volunteers from Huntsville Technical Operations dug plant holes, installed tomato cages and strung pole trellises. From left are Rodney Ashcraft, Charlie Garner, Ann Collins, Washick, Mary Beth Cornelius, Eddie Bass, Rick Underwood, Greg Martin and Melinda Johnson.

Ethics survey results tabulated



The results are in from the 2005 Lockheed Martin corporate ethics survey and in many ways Michoud Operations' responses reflect those of the rest of the corporation. Overall, the results are positive, with employees indicating an increased commitment to



ethics, reporting that ethics training was more useful, noting less perceived pressure to commit misconduct and observing less misconduct.

The only area where Michoud did not reflect the corporate trends was in reporting cases of misconduct. Whereas the trend across the corporation was an increase in reports of misconduct, Michoud showed no change.

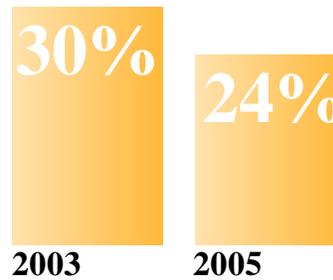
Michoud's survey participation was down, from 39 percent in 2003 to 30 percent in 2005 -- not a surprise considering that the survey was released in November, shortly after the facility reopened to all employees following Hurricane Katrina.

Across Space Systems, the most frequently perceived areas of misconduct centered on issues of honesty with management and peers (67 percent each), non-sexual harassment (47 percent), discrimination (39 percent) and improper charging (35 percent). The vast majority of employees reported incidents of perceived misconduct to their supervisor (80 percent).

At Michoud, 32 percent of employees were satisfied with the response they received to their report of perceived misconduct. Of those who were not satisfied, the reasons stated were that they received no response or feedback (28 percent each), no action was taken (29 percent) or the

actions taken were not considered by the employees to be severe enough (23 percent).

Percentage of Space Systems employees observing perceived misconduct



When Michoud employees did not report observed misconduct, the reasons ranged from an expected lack of corrective action (57 percent) to supervisory retaliation (58 percent), no trust in confidentiality (48 percent) to uncertainty whether the action was misconduct (23 percent).

"Overall, I was pleased with both the survey results and the candor of the employees," stated **Feltus Kennedy**, Michoud ethics officer. "Ethical behavior is critical to the success of the corporation, and we are committed to improving our performance each year.

"But the proof is in the actions of every employee, manager and supervisor. When ethical behavior is the expected norm, every employee will understand that they have a responsibility to maintain that behavior, and a well-founded trust that reports of misconduct will be taken care of appropriately."

Employees are encouraged to report any misconduct and unethical activity to their supervisor or to Human Resources, Legal or the Ethics Office. Complaints will be investigated and if the allegations are substantiated, appropriate discipline will be taken. ■

Milestones *Employees celebrating anniversaries with Lockheed Martin in June 2006*

35 Years

Darol Westphal

30 years

Alan Arthur
Gary Lattanzi
Dwayne Payne

25 years

Troy Alexander
Daniel Bryant

Sheila Cicchetto

Christine Cooper
Royce Daniels

Byron Davis
Claud Fuller
Theresa Gioia
Al Green

George Harris
Troy Harrison

Andy Hayes
Miles Herlekson

Webster Hill

Sandra Hindman
Ray Irby
Dale Johnson
Barbara Lafayette
James Langevin
Rodney Lemoine
Dolly Lott

Simon McNeill
Leon Messa
James Moffett

Michael Moore

Charlie Novitsky
Patrick Pansano
Michael Pohlman
Max Rabalais
Ronald Reightler
John Rhodes
Bernadette Richards
Thomas Robbins
Nick Waterwall

20 years

Emile Evans
Avert Williford

15 years

Robert Bogdan
Noel Rivers

10 years

Randy Haynes



Count yourself a hero

Lockheed Martin employees concluded their second successful blood drive of the year by donating 273 units.

Sixty-six employees requested that their blood go to help three special needs cases: 49 employees donated to 6-year-old **Gabrielle Marullo** who has leukemia and is the daughter of fire captain **Dean Marullo**; ten employees donated to 6-month-old **Donato Galipoli**, a cardiac patient; and seven employees helped New Orleans police officer **Andres Gonzalez** who was shot in the face last week.

Once tested & processed, the donations represent 819 lives that can be saved, according to The Blood Center's Boni Palazzo.

“And it's due to the efforts of the Michoud Operations team. Not a bad week's work. Not bad at all.”

She said the past week had been quite a team effort and thanked everyone again for their support of the lifesaving program. Since Hurricane Katrina, blood supplies have dropped precariously low while demand has stayed relatively high.

The Blood Center will be back for an abbreviated blood drive July 19 & 20 sponsored by the USDA. Palazzo said all those who donated May 22-25 will be eligible in July. Lockheed Martin's final blood drive will take place September 18-22. ■



Michelle Guillot, Program Management & Technical Operations, helps boost blood inventories this past week.

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LOCKHEED MARTIN 

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